

Supplement

The 49 tables included in this supplement provide information on the occurrence and relative abundance of fishes, diversity indices, and selected physical features of the aquatic faunal regions and communities recognized in the classification. For convenience in finding information on a particular region or community, these tables are arranged in the same sequence as the Aquatic Community outline provided with the text of the Classification.



MISSOURI DEPOSITORY DOCUMENT

Aquatic Community Classification System for Missouri

by William L. Pflieger

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Appendix III—Fish Faunal and Physical Characteristics of Faunal Regions and Aquatic Communities Classified in This Report.

Table 1. River Faunal Region: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **River Faunal Region** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Faunal Region				
Species	River	Lowland	Ozark	Prairie	No. of Occur.
Large Fishes:					
Silver lamprey	51.5	0.0	0.0	0.0	3
Chestnut Lamprey	23.8	2.9	31.0	2.3	46
Lake sturgeon	45.9	0.0	7.2	0.0	7
Shovelnose sturgeon	54.2	0.0	6.4	0.0	24
Pallid sturgeon	53.5	0.0	0.0	0.0	7
Paddlefish	40.2	1.6	17.0	3.9	40
Alligator gar	42.0	10.4	0.0	0.0	5
Shortnose gar	57.8	14.7	6.3	15.2	138
Bowfin	26.2	26.4	7.9	1.6	33
American eel	29.2	3.8	7.6	2.9	56
Skipjack herring	46.3	1.9	14.2	0.0	33
Threadfin shad	52.6	6.5	1.8	1.8	28
Goldeye	54.6	0.0	7.8	19.2	109
Northern pike	20.2	0.0	18.9	12.6	8
Grass carp	51.0	0.0	0.0	0.0	2
River carpsucker	57.0	3.6	6.6	45.4	355
Blue sucker	28.8	2.8	22.0	2.4	21
Bigmouth buffalo	45.0	9.6	8.9	21.7	137
Blue catfish	55.5	0.0	6.6	6.6	48
Burbot	55.5	0.0	0.0	0.0	11
White bass	68.4	4.5	9.3	4.6	96
Yellow bass	51.3	0.0	0.0	4.2	12
Striped bass	51.0	0.0	0.0	0.0	2
Sauger	60.3	1.0	11.5	6.1	81
Walleye	20.6	0.0	27.1	13.9	70
Striped mullet	50.5	0.0	0.0	0.0	1
Nektonic Fishes:					
Rainbow smelt	52.5	0.0	0.0	0.0	5
Western silvery minnow	43.9	0.0	3.4	24.7	80
Plains minnow	54.7	0.0	1.0	27.3	117
Flathead chub	72.6	0.0	0.0	5.3	61
Silver chub	79.1	1.5	2.9	16.0	139
Emerald shiner	61.1	23.5	10.2	21.0	247
River shiner	79.6	3.7	0.0	6.2	89
Ghost shiner	34.1	0.7	8.7	32.1	134
Spottail shiner	56.5	0.0	0.0	0.0	13
Red shiner	46.0	1.7	16.1	79.4	922
Silverband shiner	68.1	2.7	0.0	3.1	51
Sand shiner	28.6	0.0	20.1	65.0	693
Channel mimic shiner	58.4	3.8	3.2	0.0	33
Bullhead minnow	33.0	45.2	5.5	15.0	164
Plains killifish	24.2	0.0	0.0	28.1	9
Inland silverside	40.5	6.6	6.3	0.0	8
Benthic Fishes:					
Speckled chub	64.6	14.8	2.0	10.7	111
Sturgeon chub	61.5	0.0	0.0	0.0	23
Sicklefin chub	71.0	0.0	0.0	0.0	42
Western Sand Darter	25.9	22.2	3.8	7.6	27
Northern logperch	38.2	0.0	0.0	14.4	7
River darter	34.4	30.1	3.6	0.0	44
Number of localities	96	110	693	727	

Table 2. Big River-Missouri Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Big River-Missouri Division** (first column) that are greater than 20, and exceed indices for other Big River divisions (indices that are boldface) by a factor of 5.

	Big River Divisions				
Species	Missouri	Lower Mississippi	Middle Mississippi	Upper Mississippi	No. of Occur.
Large Fishes:					
Chestnut lamprey	53	0	20	0	15
Lake sturgeon	47	0	0	10	6
Shovelnose sturgeon	48	0	17	18	21
Pallid sturgeon	49	0	10	0	7
Paddlefish	27	0	28	38	22
Alabama shad	26	0	28	0	2
White sucker	35	0	20	0	3
Blue sucker	30	0	25	14	10
Burbot	62	0	0	0	11
Striped bass	52	0	0	0	2
Green sunfish	53	6	13	47	43
Spotted bass	31	26	23	0	12
Nektonic Fishes:					
Rainbow smelt	55	0	0	0	5
Central stoneroller	46	0	0	15	9
Western silvery minnow	84	0	14	0	39
Brassy minnow	55	0	0	0	19
Plains minnow	85	16	38	6	58
Flathead chub	82	16	38	0	53
Golden shiner	23	8	7	39	14
Ghost shiner	59	0	28	26	39
Bigmouth shiner	42	0	11	39	26
Ozark minnow	52	0	0	0	2
Rosyface shiner	53	0	0	0	3
Sand shiner	64	0	13	48	50
Channel mimic shiner	31	44	46	4	28
Bluntnose minnow	37	0	10	54	31
Fathead minnow	68	7	6	0	23
Creek chub	55	0	0	0	5
Trout perch	26	0	28	0	2
Plains killifish	54	0	0	0	4
Benthic Fishes:					
Sturgeon chub	62	0	22	0	23
Sicklefin chub	75	6	32	0	41
Gravel chub	27	0	32	0	4
Suckermouth minnow	45	0	20	34	29
Stonecat	22	0	40	21	15
Ozark logperch	44	0	19	0	8
Slenderhead darter	22	0	10	33	8
Number of localities	44	13	15	24	

Table 3. Big River-Upper Mississippi Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Big River-Upper Mississippi Division** (first column) that are greater than 20, and exceed indices for other Big River divisions (indices that are boldface) by a factor of 5.

	Big River Divisions				
Species	Upper Mississippi	Lower Mississippi	Middle Mississippi	Missouri	No. of Occur.
Large Fishes:					
Paddlefish	38	0	28	27	22
Bowfin	37	9	30	5	12
Skipjack herring	26	55	29	7	21
Northern pike	37	0	0	18	3
Quillback	46	15	6	17	16
Black buffalo	26	7	34	30	22
Golden redhorse	31	0	12	19	6
Shorthead redhorse	39	7	23	24	21
Yellow bullhead	27	23	0	16	7
Yellow bass	46	9	24	0	11
Green sunfish	47	6	13	53	43
Warmouth	39	36	8	0	11
Redear sunfish	27	30	0	0	2
Smallmouth bass	46	0	10	8	7
Walleye	54	0	13	16	17
Nektonic Fishes:					
Mississippi silvery minnow	23	43	42	4	19
Golden shiner	39	8	7	23	14
Ghost shiner	26	0	28	59	39
Bigmouth shiner	39	0	11	42	26
Pugnose minnow	29	34	0	0	4
Spottail shiner	74	0	0	0	12
Spotfin shiner	41	0	22	15	13
Sand shiner	48	0	13	64	50
Bluntnose minnow	54	0	10	37	31
Bullhead minnow	75	23	55	0	39
Blackstripe topminnow	43	35	8	0	12
Brook silverside	44	46	32	3	25
Benthic Fishes:					
Suckermouth minnow	34	0	20	45	29
Stonecat	21	0	40	22	15
Mud darter	19	21	20	0	3
Striped fantail darter	27	0	28	0	2
Johnny darter	48	0	0	11	5
Northern logperch	60	0	0	0	5
Slenderhead darter	33	0	10	22	8
River darter	50	14	41	0	20
Number of localities	24	13	15	44	

Table 4. Big River-Middle Mississippi Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Big River-Middle Mississippi Division** (first column) that are greater than 20, and exceed indices for other Big River divisions (indices that are boldface) by a factor of 5.

	Big River Divisions				
Species	Middle Mississippi	Lower Mississippi	Upper Mississippi	Missouri	No. of Occur.
Large Fishes:					
Silver lamprey	40	0	19	0	3
Chestnut lamprey	20	0	0	53	15
Paddlefish	28	0	38	27	22
Alligator gar	48	0	15	0	4
Bowfin	30	9	37	5	12
Skipjack herring	29	55	26	7	21
Alabama shad	28	0	0	26	2
Threadfin shad	40	69	18	0	21
White sucker	20	0	0	35	3
Blue sucker	25	0	14	30	10
Northern hog sucker	57	0	0	0	2
Black buffalo	34	7	26	30	22
Shorthead redhorse	23	7	39	24	21
Yellow bass	24	9	46	0	11
Spotted bass	23	26	0	31	12
Nektonic Fishes:					
Largescale stoneroller	28	0	0	26	2
Mississippi silvery minnow	42	43	23	4	19
Plains minnow	38	16	6	85	58
Flathead chub	38	16	0	82	53
Bigeye shiner	20	0	19	18	3
Ghost shiner	28	0	26	59	39
Spotfin shiner	22	0	41	15	13
Channel mimic shiner	46	44	4	31	28
Bullhead minnow	55	23	75	0	39
Trout perch	28	0	0	26	2
Brook silverside	32	46	44	3	25
Benthic Fishes:					
Sturgeon chub	22	0	0	62	23
Sicklefin chub	32	6	0	75	41
Gravel chub	32	0	0	27	4
Suckermouth minnow	20	0	34	45	29
Stonecat	40	0	21	22	15
Mud darter	20	21	19	0	3
Striped fantail darter	28	0	27	0	2
Ohio logperch	28	30	0	0	2
River darter	41	14	50	0	20
Number of localities:	15	13	24	44	

Table 5. Big River-Lower Mississippi Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Big River-Lower Mississippi Division** (first column) that are greater than 20, and exceed indices for other Big River divisions (indices that are boldface) by a factor of 5.

	Big River Divisions				
Species	Lower Mississippi	Middle Mississippi	Upper Mississippi	Missouri	No. of Occur.
Large Fishes:					
Spotted gar	55	0	0	0	1
Skipjack herring	55	29	26	7	21
Threadfin shad	69	40	18	0	21
Yellow Bullhead	23	0	27	16	7
Warmouth	36	8	39	0	11
Longear sunfish	64	16	0	11	11
Redear sunfish	30	0	27	0	2
Spotted bass	26	23	0	31	12
Striped mullet	55	0	0	0	1
Nektonic Fishes:					
Mississippi silvery minnow	55	42	23	4	19
Pugnose minnow	34	0	29	0	4
Weed shiner	64	0	0	0	3
Blacktail shiner	64	12	0	0	6
Channel mimic shiner	44	46	4	31	28
Bullhead minnow	23	55	75	0	39
Pirate perch	55	0	0	0	1
Blackstripe topminnow	35	8	43	0	12
Brook silverside	46	32	44	3	25
Inland silverside	73	0	0	0	5
Benthic Fishes:					
Mud darter	21	20	19	0	3
Bluntnose darter	30	0	27	0	2
Ohio logperch	42	28	0	0	3
Number of localities	13	15	24	44	

Table 6. Big River Region: Proportional abundance of common fishes in collections from four community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met both of these criteria. T = trace (<0.1).

Species	Missouri	Upper Mississippi	Middle Mississippi	Lower Mississippi
Large Fishes:				
Shortnose gar	2.3	9.8	9.5	6.1
Skipjack herring	T	0.1	0.3	9.1
Gizzard shad	11.2	9.9	12.0	26.3
Threadfin shad			0.6	4.2
Goldeye	5.9	0.5	4.0	1.0
Common carp	28.4	11.3	17.7	4.8
River carpsucker	19.1	6.6	11.7	16.7
Smallmouth buffalo	1.3	3.1	4.6	0.9
Blue catfish	0.4	1.1	3.2	1.6
Black bullhead	3.6	0.5	2.7	2.5
Channel catfish	9.2	5.4	4.5	7.0
Flathead catfish	1.5	3.0	5.0	1.1
Bluegill	1.0	8.3		0.6
White crappie	1.2	6.8	0.9	4.0
Black crappie	0.2	12.0	1.2	2.7
Freshwater drum	6.0	9.9	9.7	4.6
Nektonic Fishes				
Western silvery minnow	6.4	0.1	0.1	
Plains minnow	48.6	0.2	0.4	
Flathead chub	23.5		5.1	1.9
Silver chub	3.5	2.9	4.7	13.5
Emerald shiner	8.5	31.4	61.1	27.5
River shiner	1.5	28.9	19.7	46.2
Ghost shiner	0.4	7.1	0.2	
Red shiner	5.3	13.4	2.5	0.3
Silverband shiner	0.1	1.6	3.2	4.9
Bullhead minnow		7.7	0.8	0.5
Mosquitofish		2.1	T	T
Flier			T	
Benthic Fishes				
Speckled chub	37.7	42.8	56.2	96.4
Sturgeon chub	10.1		3.4	
Sicklefin chub	44.3		16.5	1.2
Suckermouth minnow	5.9	1.1	0.4	
Stonecat	0.4	3.9	4.4	
River darter		11.1	12.9	2.4
Number of localities	31	21	13	7

Table 7. Lowland Faunal Region: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Lowland Faunal Region** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Faunal Region				No. of Occur.
	Lowland	River	Ozark	Prairie	
Large Fishes:					
Spotted gar	41.9	3.6	9.6	0.0	16
Bowfin	26.4	26.2	7.9	1.6	33
Grass pickerel	22.0	1.2	37.5	0.7	74
Spotted sucker	33.0	0.0	26.0	3.5	62
Brown bullhead	38.6	13.0	0.0	0.0	4
Warmouth	45.2	10.6	16.3	5.8	107
Longear sunfish	42.2	7.3	75.5	11.0	831
Spotted sunfish	45.6	0.0	22.5	0.0	75
Spotted bass	41.4	9.0	38.0	6.2	265
Nektonic Fishes:					
Cypress minnow	53.3	0.0	0.0	0.0	9
Pallid shiner	36.7	2.4	7.9	9.9	26
Ironcolor shiner	57.0	0.0	0.0	0.0	19
Pugnose minnow	53.1	6.3	5.6	1.1	47
Ribbon shiner	64.5	0.0	6.7	0.0	64
Taillight shiner	43.5	0.0	8.4	0.0	6
Sabine shiner	25.4	0.0	25.1	0.0	2
Weed shiner	57.0	4.6	5.4	0.0	49
Eastern redbfin shiner	20.8	0.0	35.7	15.3	193
Blacktail shiner	68.1	5.7	11.2	0.0	111
Northeastern mimic shiner	38.2	1.1	28.1	0.0	82
Bullhead minnow	45.2	33.0	5.5	15.0	164
Lake chubsucker	45.4	0.0	9.6	0.0	16
Spring cavefish	50.4	0.0	0.0	0.0	1
Pirate perch	52.9	1.2	16.0	0.7	75
Starhead topminnow	50.6	4.3	0.0	0.0	13
Blackspotted topminnow	46.8	0.6	67.7	2.7	592
Mosquitofish	63.2	21.9	13.1	10.5	216
Flier	49.2	0.0	4.6	0.0	11
Banded pygmy sunfish	49.1	0.0	8.6	0.0	24
Bantam sunfish	51.1	0.0	0.0	0.0	3
Benthic Fishes:					
Tadpole madtom	43.7	5.7	4.1	22.1	110
Brindled madtom	24.3	0.0	28.8	3.9	40
Crystal darter	30.5	0.0	24.6	0.0	23
Western sand darter	22.2	25.9	3.8	7.6	27
Scaly sand darter	42.5	0.0	16.2	0.0	32
Mud darter	45.9	9.0	2.6	0.0	20
Bluntnose darter	50.4	2.4	3.1	13.3	69
Swamp darter	50.4	0.0	0.0	0.0	1
Slough darter	44.6	0.0	2.1	16.7	51
Harlequin darter	50.6	0.0	3.9	0.0	13
Goldstripe darter	51.5	0.0	0.0	0.0	4
Cypress darter	59.5	0.0	9.7	0.0	61
Speckled darter	27.1	0.0	34.3	0.0	66
Blackside darter	20.1	0.9	8.9	35.1	115
Saddleback darter	44.9	0.0	11.7	0.0	22
Dusky darter	47.5	1.3	17.2	0.0	59
River darter	30.1	34.4	3.6	0.0	44
Number of localities	110	96	693	727	

Table 8. Lowland-Flowing Waters: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Lowland-Stream Division** (first column) that are greater than 20, and exceed indices for other Lowland Divisions (indices that are boldface) by a factor of 5.

Species	Lowland Division			
	Flowing Waters	Standing Waters	Crowley's Ridge Creek	No. of Occur.
Large Fishes:				
Shortnose gar	51	13	0	19
Spotted gar	63	0	0	12
Longnose gar	49	20	0	19
Bowfin	25	38	0	13
Gizzard shad	60	45	0	64
Grass pickerel	41	33	0	20
Chain pickerel	28	28	0	7
Common carp	50	29	0	29
Highfin carpsucker	53	0	0	2
River carpsucker	28	28	0	7
Smallmouth buffalo	45	15	0	15
Bigmouth buffalo	38	25	0	14
Spotted sucker	53	0	21	27
River redhorse	55	0	0	7
Golden redhorse	55	0	0	9
Shorthead redhorse	51	13	0	16
Flathead catfish	55	0	0	15
Shadow bass	61	0	0	22
Warmouth	36	67	0	52
Orangespotted sunfish	25	62	0	39
Bluegill	56	69	6	87
Spotted sunfish	69	8	0	44
Spotted bass	78	0	8	73
Largemouth bass	41	62	0	58
White crappie	30	60	0	38
Freshwater drum	45	15	0	21
Nektonic Fishes:				
Cypress minnow	39	19	0	9
Mississippi silvery minnow	55	0	13	16
Pallid shiner	45	0	17	16
Emerald shiner	76	0	0	39
Ironcolor shiner	66	0	0	19
Pugnose minnow	56	41	7	36
Ribbon shiner	81	6	0	56
Weed shiner	76	0	0	41
Eastern redbfin shiner	41	7	42	33
Blacktail shiner	81	5	14	82
Northeastern mimic shiner	74	0	0	38
Bluntnose minnow	72	5	33	67
Bullhead minnow	78	6	8	65
Lake chubsucker	45	15	0	13
Pirate perch	54	38	7	50
Blackstripe topminnow	52	35	7	49
Brook silverside	58	35	0	61

Table 8. (Continued). Lowland-Flowing Waters: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Lowland-Stream Division** (first column) that are greater than 20, and exceed indices for other Lowland Divisions (indices that are boldface) by a factor of 5.

Species	Lowland Division			No. of Occur.
	Flowing Waters	Standing Waters	Crowley's Ridge Creek	
Benthic Fishes:				
Speckled chub	58	0	0	17
Tadpole madtom	68	12	8	51
Brindled madtom	45	0	17	15
Freckled madtom	55	0	0	14
Crystal darter	53	0	0	12
Western sand darter	53	0	0	9
Scaly sand darter	61	0	0	21
Mud darter	30	30	0	14
Bluntnose darter	39	50	7	44
Slough darter	23	63	7	33
Harlequin darter	53	0	0	12
Speckled darter	68	0	0	24
Ohio logperch	55	0	0	9
Blackside darter	55	0	13	25
Saddleback darter	58	0	0	16
Dusky darter	71	0	0	38
River darter	45	15	0	19
Number of localities	78	19	13	

Table 9. Lowland-Standing Waters Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Lowland-Standing Waters Division** (first column) that are greater than 20, and exceed indices for other Lowland Divisions (indices that are boldface) by a factor of 5.

	Lowland Division			
Species	Standing Waters	Flowing Waters	Crowley's Ridge Creek	No. of Occur.
Large Fishes:				
Longnose gar	20	49	0	19
Bowfin	38	25	0	13
Gizzard shad	45	60	0	64
Grass pickerel	33	41	0	20
Chain pickerel	28	0	0	7
Common carp	29	50	0	29
River carpsucker	28	28	0	7
Bigmouth buffalo	25	38	0	14
Brown bullhead	58	0	0	3
Warmouth	67	36	0	52
Orangespotted sunfish	62	25	0	39
Bluegill	69	56	6	87
Largemouth bass	62	41	0	58
White crappie	60	30	0	38
Black crappie	68	14	0	32
Nektonic Fishes:				
Pugnose minnow	41	56	7	36
Taillight shiner	55	0	0	5
Pirate perch	38	54	7	50
Starhead topminnow	62	9	0	12
Brook silverside	35	58	0	61
Flier	68	0	0	10
Banded pygmy sunfish	61	15	0	19
Bantam sunfish	58	0	0	3
Benthic Fishes:				
Mud darter	30	30	0	14
Bluntnose darter	50	39	7	44
Swamp darter	53	0	0	1
Slough darter	63	23	7	33
Number of localities	19	78	13	

Table 10. Lowland-Crowley's Ridge Creek Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Lowland-Crowley's Ridge Creek Division** (first column) that are greater than 20, and exceed indices for other Lowland Divisions (indices that are boldface) by a factor of 5.

Species	Lowland Division			No. of Occur.
	Crowley's Ridge Creek	Flowing Waters	Standing Waters	
Large Fishes:				
Spotted sucker	21	53	0	27
Nektonic Fishes:				
Central stoneroller	57	13	0	8
Striped shiner	57	0	13	7
Red shiner	63	0	0	4
Eastern redbfin shiner	42	41	7	33
Bluntnose minnow	33	72	5	67
Creek chub	92	0	0	10
Creek chubsucker	68	0	10	14
Benthic Fishes:				
Suckermouth minnow	68	10	0	14
Johnny darter	42	19	0	9
Goldstripe darter	63	0	0	4
Northeastern orangethroat darter	58	0	0	6
Number of localities	13	78	19	

Table 11. Lowland Region: Proportional abundance of common fishes in collections from five community types. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community types. Boldface percentages indicate community types in which the species met both of these criteria. T = trace (<0.1%).

Species	Standing Waters	Crowley's Ridge Creek	Flowing Waters ¹	Flowing Waters ²	Flowing Water ³
Large Fishes:					
Shortnose gar	0.1			0.4	3.0
Gizzard shad	7.1		16.8	6.7	18.3
Common carp	0.7		7.3	6.7	10.8
Channel catfish	0.1	2.6	0.4	2.7	7.2
Flathead catfish			T	0.7	2.6
Shadow bass			6.0	4.7	0.2
Green sunfish	6.5	45.6	2.6	6.2	0.9
Warmouth	13.5		1.2	2.6	1.1
Orangespotted sunfish	6.1		0.7	1.0	13.7
Bluegill	40.4	12.3	5.5	4.4	7.3
Longear sunfish	2.0	21.9	13.7	27.3	10.9
Spotted sunfish	0.1	1.8	24.0	8.8	0.2
Spotted bass		3.5	3.3	19.6	4.6
Largemouth bass	2.5		6.1	1.1	1.4
White crappie	11.5			0.4	4.9
Black crappie	4.3		0.1	0.5	0.8
Nektonic Fishes:					
Central stoneroller		9.0		T	0.2
Golden shiner	7.8	0.6	3.0	0.3	0.6
Emerald shiner			1.9	4.5	3.4
Ironcolor shiner			8.4	0.2	
Striped shiner	T	8.0			
Pugnose minnow	8.5	0.2	1.3	0.1	1.9
Ribbon shiner	T		13.8	5.3	0.9
Red shiner		3.2			
Weed shiner			10.8	7.8	0.6
Eastern redbfin shiner	T	28.0	4.5	0.4	5.2
Blacktail shiner	T	0.7	6.8	35.2	41.3
Northeastern mimic shiner			0.4	4.0	1.2
Bluntnose minnow	T	7.6	4.1	4.9	2.8
Bullhead minnow	0.1	0.1	0.9	17.4	21.8
Creek chub		26.2			
Lake chubsucker	0.3		9.4		
Pirate perch	2.5	0.9	4.0	0.1	1.4
Starhead topminnow	6.6				
Blackstripe topminnow	3.8	0.2	5.6	6.4	0.4
Blackspotted topminnow	9.6	8.5	5.4	3.2	6.5
Mosquitofish	29.5	3.1	15.6	6.8	6.4
Brook silverside	19.6		2.1	1.9	1.7

Table 11. (Continued). Lowland Region: Proportional abundance of common fishes in collections from five community types. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community types. Boldface percentages indicate community types in which the species met both of these criteria. T = trace (<0.1%).

Species	Standing Waters	Crowley's Ridge Creek	Flowing Waters ¹	Flowing Waters ²	Flowing Water ³
Benthic Fishes:					
Speckled chub				36.8	0.8
Suckermouth minnow		33.3	0.2	0.6	32.5
Tadpole madtom	1.2	5.2	10.5	9.4	3.2
Scaly sand darter				12.0	0.6
Bluntnose darter	31.6	5.0	2.2	1.0	31.6
Slough darter	17.1	1.7	36.6	1.0	1.7
Goldstripe darter		7.5			
Cypress darter	44.0	38.5	39.1	11.5	0.8
Northeastern orangethroat darter	3.4				
Speckled darter			0.6	3.7	1.0
Blackside darter		0.6	0.1	1.9	8.6
Saddleback darter			0.2	4.2	0.1
Dusky darter			1.8	7.4	6.4
River darter	0.2		0.2	4.5	0.5
Number of localities	21	14	25	20	28

¹ = Clear heavily vegetated ditches

² = Turbid sparsely vegetated ditches

³ = Natural lowland streams and larger ditches

Table 12. Lowland Region: Selected physical and biological variables in samples from five community types. For each variable, the average, range, and sample size are given.

Variable	Crowley's Ridge Creek	Flowing Waters ¹	Flowing Waters ²	Flowing Waters ³	Standing Water
Miles-to- Headwater	4.2 (1-13) 13	20.9 (2-69) 26	37.9 (8-81) 17	125.9 (17-257) 24	N/A
Stream Gradient (ft./mi.)	31.8 (3-131) 13	1.2 (1-3) 26	1.1 (1-2) 17	1.0 (1-2) 24	N/A
Local Relief (ft.)	156 (76-231) 13	13 (5-28) 21	13 (5-20) 16	27 (9-86) 23	31 (1-238) 19
Elevation (ft.)	349 (304-400) 13	273 (232-315) 21	264 (240-300) 16	272 (232-324) 23	315 (270-360) 19
Species/ sample	9.1 (2-22) 14	21.1 (13-36) 24	23.4 (13-36) 20	25.4 (13-52) 27	14.0 (1-33) 21
Margalef Diversity Index	0.91 (0.26-1.64) 9	2.62 (1.91-3.19) 8	2.72 (2.05-3.67) 9	3.01 (1.25-4.14) 12	1.67 (0.80-3.29) 10

¹ = Clear heavily vegetated ditches

² = Turbid sparsely vegetated ditches

³ = Natural lowland streams and larger ditches

Table 13. Ozark Faunal Region: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark Faunal Region** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Faunal Region				No. of Occur.
	Ozark	River	Lowland	Prairie	
Large Fishes:					
Chestnut lamprey	31.0	23.8	2.9	2.3	46
American eel	27.6	29.2	3.8	2.9	56
Alabama shad	39.3	12.1	0.0	0.0	28
Rainbow trout	51.7	0.0	0.0	0.0	28
Grass pickerel	37.5	1.2	22.0	0.7	74
Chain pickerel	43.8	0.0	10.9	0.0	42
Goldfish	31.5	0.0	0.0	18.9	8
Highfin carpsucker	28.7	0.0	4.4	19.1	27
White sucker	20.9	1.9	0.0	52.9	405
Blue sucker	22.0	28.8	2.8	2.4	21
Northern hog sucker	71.0	1.2	0.5	4.1	427
Spotted sucker	26.0	0.0	33.0	3.5	62
Silver redhorse	44.4	1.4	1.3	6.9	54
River redhorse	46.3	0.0	8.1	1.7	64
Black redhorse	64.1	0.0	0.5	3.6	300
Golden redhorse	49.3	3.6	3.8	27.9	491
Yellow bullhead	30.3	4.4	13.5	36.1	382
Rock bass	58.5	0.8	0.0	0.0	149
Shadow bass	44.2	0.0	18.8	0.0	103
Ozark bass	52.5	0.0	0.0	0.0	41
Pumpkinseed	25.1	0.0	0.0	25.1	2
Longear sunfish	75.5	7.3	42.2	11.0	831
Redear sunfish	39.9	8.1	3.9	0.0	14
Spotted sunfish	22.5	0.0	45.6	0.0	75
Smallmouth bass	69.3	4.2	0.5	9.7	505
Spotted bass	38.0	9.0	41.4	6.2	265
Walleye	27.1	20.6	0.0	13.9	70

Table 13. (Continued). Ozark Faunal Region: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark Faunal Region** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Faunal Region				
Species	Ozark	River	Lowland	Prairie	No. of Occur.
Nektonic Fishes:					
Central stoneroller	69.5	4.9	3.3	50.0	1,186
Largescale stoneroller	79.8	1.2	2.8	2.3	556
Silverjaw minnow	49.0	2.8	0.0	0.0	22
Bigeye chub	59.6	0.0	0.7	0.0	167
Redspot chub	51.4	0.0	0.0	1.2	43
Hornyhead chub	75.1	0.0	0.0	4.5	495
Bigeye shiner	57.3	2.0	2.1	9.3	302
Bluntnose shiner	45.0	0.0	0.0	6.4	24
Cardinal shiner	51.0	0.0	0.0	0.4	60
Striped shiner	69.4	0.0	3.4	4.2	414
Whitetail shiner	56.3	0.0	0.8	0.0	113
Wedgespot shiner	61.0	0.0	0.0	0.0	184
Blacknose shiner	32.6	0.0	0.0	20.2	47
Ozark minnow	80.7	1.2	0.5	0.3	525
Ozark shiner	52.5	0.0	0.0	0.0	41
Duskystripe shiner	52.4	0.0	0.0	0.0	78
Rosyface shiner	65.7	1.8	0.0	10.2	442
Telescope shiner	58.3	0.0	0.0	0.0	139
Sabine shiner	25.1	0.0	25.4	0.0	2
Spotfin shiner	48.7	12.1	0.0	2.0	117
Sand shiner	20.1	28.6	0.0	65.0	693
Western redbfin shiner	26.0	1.8	0.0	57.9	570
Eastern redbfin shiner	35.7	0.0	20.8	15.3	193
Northeastern mimic shiner	28.1	1.1	38.2	0.0	82
Southwestern mimic shiner	20.2	0.0	0.0	30.4	10
Steelcolor shiner	49.9	0.0	4.5	2.9	96
Bleeding shiner	79.7	0.0	0.0	0.3	502
Southern redbelly dace	60.3	0.7	0.6	4.6	257
Western slim minnow	30.5	0.0	0.0	20.4	15
Eastern slim minnow	50.5	0.0	0.0	0.0	8
Creek chub	40.2	2.8	4.3	60.3	869
Creek chubsucker	49.0	0.0	11.7	0.0	107
Southern cavefish	50.1	0.0	0.0	0.0	2
Northern studfish	76.4	0.0	0.0	3.7	502
Blackspotted topminnow	67.7	0.6	46.8	2.7	592
Plains topminnow	43.3	0.0	0.0	10.6	66
Brook silverside	55.6	16.2	30.2	9.2	492
Benthic Fishes:					
Northern brook lamprey	50.7	0.0	0.0	0.0	12
Southern brook lamprey	50.2	0.0	0.0	0.0	3
Larval lamprey	49.1	0.0	2.5	0.0	23
Least brook lamprey	51.1	0.0	0.0	0.0	18
American brook lamprey	50.4	0.0	0.0	0.0	7
Streamline chub	53.2	0.0	0.0	0.0	53
Gravel chub	49.6	3.5	0.0	6.6	132
Ozark madtom	54.0	0.0	0.0	0.0	66
Mountain madtom	50.1	0.0	0.0	0.0	2
Slender madtom	57.5	0.0	0.0	16.9	406
Checkered madtom	51.2	0.0	0.0	0.0	20
Stonecat	23.2	13.5	0.0	27.3	124
Brindled madtom	28.8	0.0	24.3	3.9	40
Neosho madtom	50.1	0.0	0.0	0.0	2
Crystal darter	24.6	0.0	30.5	0.0	23
Greenside darter	75.7	0.0	1.0	0.9	450
Rainbow darter	82.4	0.6	0.0	0.2	546
Arkansas darter	33.9	0.0	0.0	17.0	15

Table 13. (Continued). Ozark Faunal Region: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark Faunal Region** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Faunal Region				No. of Occur.
	Ozark	River	Lowland	Prairie	
White river saddled darter	50.9	0.0	0.0	0.0	15
Current River saddled darter	50.5	0.0	0.0	0.0	9
Barred fantail darter	51.7	0.0	0.0	0.0	28
Striped fantail darter	62.5	1.2	0.0	16.9	496
Golden fantail darter	50.5	0.0	0.0	0.0	9
Yoke darter	52.6	0.0	0.0	0.0	44
Least darter	45.9	0.0	2.2	3.8	27
Niangua darter	51.9	0.0	0.0	0.0	32
Johnny darter	22.9	3.0	4.3	52.5	461
Stippled darter	58.9	0.0	0.0	0.0	148
Northeastern orangethroat darter	52.3	1.1	2.2	39.4	711
Neosho River orangethroat darter	43.1	0.0	0.0	11.0	69
Current River orangethroat darter	52.7	0.0	1.2	0.0	60
White River orangethroat darter	52.7	0.0	0.0	0.0	45
Speckled darter	34.3	0.0	27.1	0.0	66
Missouri saddled darter	60.5	0.0	0.0	0.0	176
Banded darter	66.5	0.0	2.2	0.2	295
Ohio logperch	49.5	3.0	7.7	0.0	102
Ozark logperch	36.5	5.2	0.0	31.2	323
Channel darter	29.6	0.0	0.0	21.1	12
Bluestripe darter	52.2	0.0	0.0	0.0	36
Gilt darter	56.0	0.0	0.0	0.0	101
Longnose darter	50.2	0.0	0.0	0.0	4
Slenderhead darter	28.0	6.1	0.0	30.7	188
Stargazing darter	50.2	0.0	0.0	0.0	4
Banded sculpin	64.7	0.7	0.0	1.7	278
Ozark sculpin	64.5	0.0	0.0	0.0	242
Number of localities	693	96	110	727	

Table 14. Ozark-Neosho Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-Neosho Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						
Species	Neosho	White	Black	Southeast	Mississippi	Missouri	No. of Occur.
Large Fishes:							
Rock bass	29	0	0	0	24	52	113
Nektonic Fishes:							
Bigeye chub	24	29	43	25	28	0	153
Redspot chub	88	0	0	0	0	0	38
Bluntnose shiner	68	0	0	0	0	0	18
Cardinal shiner	93	0	0	0	0	0	48
Western redbelt shiner	21	0	0	0	0	72	165
Southwestern mimic shiner	54	0	0	0	0	0	4
Western slim minnow	58	0	0	0	0	0	8
Blackstripe topminnow	48	0	0	6	42	2	70
Mosquitofish	32	0	18	7	6	13	43
Benthic Fishes:							
Slender madtom	40	24	4	10	17	62	269
Neosho madtom	52	0	0	0	0	0	2
Arkansas darter	58	0	0	0	0	0	8
Striped fantail darter	49	1	13	34	29	64	334
Least darter	20	0	0	0	3	34	17
Stippled darter	23	24	2	0	0	53	140
Neosho River orangethroat darter	97	0	0	0	0	0	47
Redfin darter	51	0	0	0	0	0	1
Ozark logperch	22	0	0	0	39	67	144
Channel darter	56	0	0	0	0	0	6
Number of localities	55	69	124	42	120	283	

Table 15. Ozark-Neosho Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad			0.5	3.9
Rainbow trout	3.3		0.1	
White sucker	65.6	3.7	9.8	
Black redhorse		1.7	5.7	
Golden redhorse		0.8	23.3	2.0
Channel catfish		0.2	1.2	7.8
Flathead catfish			0.5	27.5
Green sunfish	13.3	13.6	2.9	2.0
Orangespotted sunfish	5.6	5.2	9.1	4.9
Longear sunfish		52.3	16.5	37.3
Smallmouth bass	1.1	6.1	8.3	
Spotted bass		0.9	4.5	6.9
Largemouth bass	1.1	2.6	2.9	3.9
Nektonic Fishes:				
Central stoneroller	21.8	8.7	5.0	3.5
Bigeye shiner		5.1	3.0	1.1
Bluntnose shiner		0.2	3.0	16.9
Red shiner		0.1	1.5	35.4
Ozark minnow	0.3	20.0	13.3	
Cardinal shiner	1.9	20.4	38.0	4.4
Rosyface shiner	0.1	6.4	13.9	3.5
Southwestern mimic shiner		0.1	0.7	4.6
Southern redbelly dace	70.3		13.3	0.9
Bluntnose minnow	0.6	11.0	11.7	9.8
Western slim minnow		T	0.8	7.9
Brook silverside		4.0	1.0	8.1
Benthic Fishes:				
Gravel chub			0.4	5.5
Suckermouth minnow			0.7	12.0
Slender madtom		9.3	13.6	15.5
Stonecat				6.2
Greenside darter	0.2	1.4	3.4	5.3
Arkansas Darter	15.4	11.7	0.7	
Striped fantail darter	26.8	20.9	9.8	14.8
Least darter	5.7	0.9		
Stippled darter	1.8	3.6	2.3	
Neosho River orangethroat darter	49.9	45.2	41.9	10.6
Banded darter		1.4	8.2	21.2
Slenderhead darter				3.9
Banded sculpin	0.2	3.7	3.4	
Number of localities	7	30	24	3

Table 16. Ozark-Neosho Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	III-5	III-5, IV-11, V-10	V-8, V-9	VII-2
Miles to Headwater	4.8 (3-6) 5	16.6 (5-27) 26	48.1 (24-76) 17	83.0 (82-84) 2
Stream Gradient (ft./mi.)	22.8 (13-33) 5	10.3 (5-25) 26	5.1 (3-9) 17	3.0 (2-4) 2
Local Relief (ft.)	128 (82-148) 5	159 (70-321) 26	198 (108-321) 17	94 (86-101) 2
Elevation (ft.)	1100 (888-1292) 5	1030 (780-1361) 26	918 (754-1092) 17	832 (829-834) 2
No. of Species per Sample	12.1 (8-21) 7	18.0 (8-27) 29	22.6 (12-40) 21	33.0 (27-39) 2
Margalef Diversity Index	1.45 (1.18-1.95) 4	1.98 (0.89-2.96) 10	2.63 (1.84-3.85) 9	3.53 (2.92-4.13) 2

Table 17. Ozark-White Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-White Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						No. of Occur.
Species	White	Neosho	Black	Southeast	Mississippi	Missouri	
Large Fishes:							
Rainbow trout	20	6	13	0	10	12	23
Grass pickerel	21	0	15	20	26	0	49
Yellow bullhead	20	3	28	23	20	30	160
Ozark bass	72	0	0	0	0	3	36
Spotted bass	22	16	19	29	0	37	144
Nektonic Fishes:							
Largescale stoneroller	40	0	51	40	41	57	435
Bigeye chub	29	24	43	25	28	0	153
Hornyhead chub	42	0	46	21	28	59	382
Whitetail shiner	54	0	51	7	0	0	102
Wedgespot shiner	22	4	20	17	24	31	155
Ozark shiner	27	0	38	8	0	0	37
Duskystripe shiner	97	0	0	0	0	0	63
Telescope shiner	38	0	60	35	0	0	124
Northern studfish	42	6	46	33	42	52	403
Blackspotted topminnow	45	0	48	43	19	60	398
Benthic Fishes:							
Streamline chub	31	0	33	19	0	0	47
Ozark madtom	42	0	38	10	0	0	62
Slender madtom	24	40	4	10	17	62	269
Checkered madtom	46	0	16	0	0	0	18
Rainbow darter	50	0	51	42	39	54	436
White River saddled darter	55	0	0	0	0	0	13
Golden fantail darter	55	0	0	0	0	0	7
Yoke darter	76	0	0	0	0	0	36
Stippled darter	24	23	2	0	0	53	140
White River orangethroat darter	76	0	0	0	0	0	35
Ohio logperch	23	0	21	25	0	0	94
Longnose darter	26	0	0	28	0	0	4
Banded sculpin	45	33	36	10	8	34	233
Ozark sculpin	24	0	34	3	17	43	200
Number of localities	69	55	124	42	120	283	

Table 18. Ozark-White Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad			3.1	2.9
Grass pickerel		3.9	0.1	
Northern hog sucker		4.8	5.8	4.7
Black redhorse		2.4	15.7	5.2
Golden redhorse		0.3	5.7	4.1
Ozark bass		9.0	16.3	8.8
Green sunfish	86.7	5.7	2.9	2.1
Bluegill	6.7	3.0	1.1	1.4
Longear sunfish		44.1	32.5	52.1
Smallmouth bass		12.9	9.4	7.6
Spotted bass		1.5	1.8	3.5
Largemouth bass		4.5	1.4	0.4
Nektonic Fishes:				
Central stoneroller	14.8	14.4	1.9	2.8
Largescale stoneroller	3.6	2.9	8.0	5.4
Hornyhead chub	2.1	4.6	7.3	1.0
Bigeye shiner		0.8	1.1	6.8
Striped shiner	0.4	5.5	13.8	2.8
Whitetail shiner	0.6	2.7	6.7	14.1
Wedgespot shiner		0.1	0.7	3.4
Ozark minnow	0.7	23.6	19.3	15.2
Ozark shiner		0.9	0.1	4.9
Duskystripe shiner	13.7	19.6	19.0	15.9
Rosyface shiner		1.8	5.6	13.4
Telescope shiner	T	8.0	2.7	0.2
Southern redbelly dace	54.2	2.4	0.1	T
Bluntnose minnow		2.2	2.9	29.9
Northern studfish	6.0	2.9	4.4	2.7
Blackspotted topminnow	1.8	3.8	3.0	1.4
Brook silverside		0.8	1.0	3.7
Benthic Fishes:				
Streamline chub		0.2	2.1	23.5
Ozark madtom		1.0	6.8	2.7
Slender madtom	1.9	3.6	6.3	1.7
Greenside darter		2.3	7.1	10.3
Rainbow darter	24.8	33.5	25.1	8.9
White River saddled darter		0.6	1.1	8.6
Yoke darter		4.9	18.4	7.7
Stippled darter	6.8	2.8	0.8	1.1
White River orangethroat darter	58.4	36.7	5.6	3.1
Banded darter		0.9	6.0	9.2
Ohio logperch		0.2	3.5	9.0
Gilt darter			0.3	6.6
Banded sculpin	1.8	6.5	8.1	2.6
Ozark sculpin	3.8	3.5	6.4	0.5
Number of localities	13	26	35	13

Table 19. Ozark-White Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-2, II-4, III-7	III-2, IV-11, V-10	IV-1, V-15 VI-10	VI-2, VII-8
Miles to Headwater	3.3 (1-5) 13	15.0 (7-25) 23	50.5 (26-94) 26	151.8 (69-234) 10
Stream Gradient (ft./mi.)	58.2 (24-105) 13	14.0 (5-25) 23	6.6 (3-20) 26	3.0 (2-4) 10
Local Relief (ft.)	228 (167-335) 13	305 (177-500) 23	307 (192-441) 26	408 (318-580) 10
Elevation (ft.)	1058 (700-1423) 13	990 (620-1351) 23	937 (615-1188) 26	714 (540-923) 10
No. of Species per Sample	8.3 (2-17) 13	19.8 (5-34) 26	26.4 (15-47) 29	33.9 (18-60) 13
Margalef Diversity Index	1.04 (0.33-1.69) 11	2.51 (0.56-4.03) 8	3.24 (2.82-3.81) 8	3.74 (2.11-4.65) 4

Table 20. Ozark-Black Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-Black Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						
Species	Black	Neosho	White	Southeast	Mississippi	Missouri	No. of Occur.
Large Fishes:							
Spotted gar	34	0	0	0	17	0	3
Bowfin	52	0	0	0	0	0	5
American eel	32	0	4	0	9	18	35
Skipjack herring	24	0	0	0	18	11	9
Chain pickerel	65	0	0	0	0	0	32
Bigmouth buffalo	22	0	3	4	5	25	22
Black buffalo	21	12	0	0	4	20	16
Yellow bullhead	28	3	20	23	20	30	160
Shadow bass	52	0	0	34	0	0	89
Warmouth	44	0	3	9	5	4	27
Redear sunfish	27	0	6	6	11	5	10
Spotted sunfish	58	0	2	5	2	0	34
Walleye	20	0	4	5	11	24	36
Nektonic Fishes:							
Largescale stoneroller	51	0	40	40	41	57	435
Mississippi silvery minnow	39	0	0	4	16	0	18
Bigeye chub	43	24	29	25	28	0	153
Hornyhead chub	46	0	42	21	28	59	382
Striped shiner	48	9	40	45	49	27	329
Pugnose minnow	52	0	0	0	0	0	5
Ribbon shiner	30	0	0	25	0	0	7
Whitetail shiner	51	0	54	7	0	0	102
Wedgespot shiner	20	4	22	17	24	31	155
Ozark shiner	38	0	27	8	0	0	37
Telescope shiner	60	0	38	35	0	0	124
Weed shiner	42	0	0	11	0	0	5
Eastern redbfin shiner	39	0	0	21	46	0	104
Blacktail shiner	33	0	0	34	0	0	20
Bleeding shiner	53	0	0	34	38	66	403
Eastern slim minnow	33	0	6	19	0	0	10
Bullhead minnow	23	0	0	23	15	0	15
Creek chubsucker	36	0	13	37	20	0	83
Pirate perch	31	0	0	27	6	0	19
Blackspotted topminnow	48	0	45	43	19	60	398
Northern Studfish	46	6	42	32	42	52	403

Table 20. (Continued). Ozark-Black Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-Black Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						
Species	Black	Neosho	White	Southeast	Mississippi	Missouri	No. of Occur.
Benthic Fishes:							
Least brook lamprey	36	0	15	4	4	0	16
American brook lamprey	46	0	0	8	0	0	7
Streamline chub	33	0	31	19	0	0	47
Ozark madtom	38	0	42	10	0	0	62
Mountain madtom	25	0	0	26	0	0	2
Brindled madtom	20	14	0	36	0	0	21
Scaly sand darter	25	0	0	35	0	0	11
Rainbow darter	51	0	50	42	39	54	436
Bluntnose darter	26	0	0	14	13	0	4
Current River saddled darter	54	0	0	0	0	0	9
Barred fantail darter	61	0	0	0	0	0	24
Cypress darter	38	0	0	13	5	0	10
Current River orangethroat darter	69	0	0	0	0	0	41
Speckled darter	31	11	12	25	0	0	39
Ohio logperch	21	0	23	25	0	0	94
Gilt darter	22	0	10	11	17	28	91
Blackside darter	20	0	0	34	3	6	17
Saddleback darter	31	0	0	23	0	0	5
Dusky darter	27	0	0	38	0	0	17
Stargazing darter	51	0	0	0	0	0	3
Number of localities	124	55	69	42	120	283	

Table 21. Ozark-Black Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad		0.4	1.0	7.6
Northern hog sucker	3.3	9.0	7.1	3.8
Black redhorse	1.6	6.5	8.3	6.7
Golden redhorse	6.6	8.9	1.7	10.4
Yellow bullhead	1.6	3.1	3.7	0.7
Shadow bass	9.8	7.4	25.2	18.5
Green sunfish	56.0	5.8	2.0	2.7
Bluegill	3.3	3.2	2.1	3.0
Longear sunfish	18.0	34.5	35.6	24.7
Smallmouth bass	1.6	8.3	6.0	4.4
Nektonic Fishes:				
Central stoneroller	10.3	5.2	5.5	0.9
Largescale stoneroller	0.6	4.1	5.2	7.2
Mississippi silvery minnow				13.0
Bigeye chub		1.6	4.2	4.6
Hornyhead chub	1.7	2.3	3.1	1.6
Bigeye shiner		4.4	1.3	4.3
Striped shiner	6.1	6.4	3.6	5.0
Whitetail shiner		0.7	2.6	6.7
Ozark minnow	1.2	22.0	12.0	2.4
Rosyface shiner		1.0	6.9	5.8
Telescope shiner	1.6	16.3	5.4	2.2
Bleeding shiner	7.3	12.8	35.5	21.7
Southern redbelly dace	52.8	1.5	0.5	
Bluntnose minnow	7.3	3.7	1.9	4.1
Creek chub	11.2	4.3	0.2	0.1
Northern studfish	1.5	3.4	4.3	2.2
Blackspotted topminnow	0.7	4.7	1.1	2.8
Brook silverside		0.6	0.3	3.4
Benthic Fishes:				
Streamline chub		0.2	4.3	6.7
Ozark madtom		3.4	3.8	4.7
Greenside darter	0.4	3.1	4.7	5.8
Rainbow darter	17.3	55.6	31.9	10.4
Current River saddled darter			1.0	4.0
Barred fantail darter	5.7	6.1	1.7	0.1
Current River orangethroat darter	63.7	10.2	4.5	1.1
Speckled darter		3.1	0.9	3.1
Banded darter		0.8	7.4	3.1
Gilt darter			1.6	14.8
Banded sculpin	0.1	1.7	7.3	4.5
Ozark sculpin	3.0	3.2	18.9	10.9
Number of localities	18	53	33	36

Table 22. Ozark-Black Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-4, II-7, III-7	III-11, IV-30, V-6	V-9, VI-18	VII-26
Miles to Headwater	2.8 (1-5) 18	14.6 (5-31) 47	53.5 (19-91) 27	107.8 (70-157) 26
Stream Gradient (ft./mi.)	67.5 (15-175) 18	15.8 (5-35) 47	6.6 (3-16) 27	3.1 (1-5) 26
Local Relief (ft.)	231 (32-470) 18	266 (103-438) 47	343 (128-471) 27	304 (114-555) 26
Elevation (ft.)	840 (327-1155) 18	650 (297-1056) 47	567 (302-900) 27	391 (284-549) 26
No. of Species per Sample	8.7 (4-19) 18	18.6 (5-44) 50	27.3 (15-58) 31	37.1 (20-86) 28
Margalef Diversity Index	0.76 (0.58-2.00) 13	2.55 (1.41-4.37) 9	2.94 (1.92-4.23) 7	4.28 (2.56-6.68) 9

Table 23. Ozark-Southeast Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-Southeast Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						
Species	Southeast	Neosho	White	Black	Mississippi	Missouri	No. of Occur.
Large Fishes:							
Grass pickerel	20	0	21	15	26	0	49
Yellow bullhead	23	3	20	28	20	30	160
Shadow bass	34	0	0	52	0	0	89
Spotted bass	29	16	22	19	0	37	144
Nektonic Fishes:							
Largescale stoneroller	40	0	40	51	41	57	435
Bigeye chub	25	24	29	43	28	0	153
Hornyhead chub	21	0	42	46	28	59	382
Striped shiner	45	9	40	48	49	27	329
Ribbon shiner	25	0	0	30	0	0	7
Telescope shiner	35	0	38	60	0	0	124
Eastern redbfin shiner	21	0	0	39	46	0	104
Blacktail shiner	34	0	0	33	0	0	20
Steelcolor shiner	37	0	13	0	51	0	74
Bleeding shiner	34	0	0	53	38	66	403
Bullhead minnow	23	0	0	23	15	0	15
Creek chubsucker	37	0	13	36	20	0	83
Pirate perch	27	0	0	31	6	0	19
Blackspotted topminnow	43	0	45	48	19	60	398
Northern studfish	33	6	42	46	42	52	403
Benthic Fishes:							
Mountain madtom	26	0	0	25	0	0	2
Brindled madtom	36	14	0	20	0	0	21
Western sand darter	26	0	0	0	25	0	2
Scaly sand darter	35	0	0	25	0	0	11
Rainbow darter	42	0	50	51	39	54	436
Striped fantail darter	34	49	1	13	29	64	334
Northeastern orangethroat darter	28	0	0	5	39	80	343
Speckled darter	25	11	12	31	0	0	39
Ohio logperch	25	0	23	21	0	0	94
Blackside darter	34	0	0	20	3	6	17
Longnose darter	28	0	26	0	0	0	4
Saddleback darter	23	0	0	31	0	0	5
Dusky darter	38	0	0	27	0	0	17
Number of localities	42	55	69	124	120	283	

Table 24. Ozark-Southeast Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad			3.8	9.7
Northern hog sucker	2.8	3.1	6.1	5.4
Black redhorse		0.8	0.7	13.1
Golden redhorse		1.6	16.6	11.8
Green sunfish	32.1	4.8	11.3	3.0
Bluegill	5.5	27.9	2.3	1.6
Longear sunfish	8.7	32.9	33.5	26.6
Smallmouth bass	0.5	14.5	2.3	1.9
Spotted bass		5.5	6.1	8.5
Nektonic Fishes:				
Central stoneroller	55.7	4.6	2.5	1.2
Largescale stoneroller	0.6	4.2	13.1	9.2
Mississippi silvery minnow				11.3
Bigeye chub		1.9	4.0	1.7
Emerald shiner			0.3	4.7
Bigeye shiner	0.1	7.0	19.8	14.4
Striped shiner	0.2	10.4	3.9	2.0
Wedgespot shiner		1.1	1.0	5.2
Ozark minnow	0.1	13.5	0.2	0.9
Rosyface shiner		3.0	3.8	4.6
Telescope shiner		9.4	0.7	0.2
Steelcolor shiner		2.3	9.2	13.2
Bleeding shiner	0.2	11.0	4.9	2.5
Southern redbelly dace	8.7	1.1		T
Bluntnose minnow	0.5	5.1	17.5	6.4
Creek chub	24.7	1.6	0.2	0.1
Northern studfish	0.1	7.9	1.3	7.3
Blackspotted topminnow	6.8	9.1	4.5	2.2
Brook silverside		0.8		6.4
Benthic Fishes:				
Streamline chub		14.3	31.2	9.0
Scaly sand darter		0.9	2.4	4.6
Greenside darter		10.5	11.3	1.6
Rainbow darter	14.5	53.2	39.4	48.1
Striped fantail darter	9.7	9.0	2.7	1.2
Northeastern orangethroat darter	75.3	3.5	0.5	0.5
Speckled darter		0.3	15.0	0.4
Banded darter		6.5	9.5	7.8
Ohio logperch		1.5	5.3	4.7
Gilt darter		0.6	1.6	8.1
Number of localities	13	21	16	12

Table 25. Ozark-Southeast Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-1, II-7 III-4	II-1, III-2 IV-12, V-3	V-3, VI-8	VI-2
Miles to Headwater	2.8 (4-5) 13	14.8 (7-26) 18	52.0 (35-72) 11	95.5 (94-97) 2
Stream Gradient (ft./mi.)	64.5 (19-175) 13	14.5 (2-40) 18	4.7 (1-17) 11	3.0 (3-3) 2
Local Relief (ft.)	352 (150-625) 13	321 (199-667) 18	368 (50-835) 11	408 (221-594) 2
Elevation (ft.)	817 (645-1180) 13	637 (380-947) 18	454 (350-684) 11	382 (379-386) 2
No. of Species per Sample	7.9 (3-14) 13	20.7 (11-35) 20	31.2 (15-51) 15	46.7 (21-78) 3
Margalef Diversity Index	0.78 (0.35-1.67) 8	1.80 (1.62-1.98) 2	3.13 (2.22-4.01) 6	4.79 (3.69-5.88) 2

Table 26. Ozark-Mississippi Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-Mississippi Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						
Species	Mississippi	Neosho	White	Black	Southeast	Missouri	No. of Occur.
Large Fishes:							
Grass pickerel	26	0	21	15	20	0	49
Yellow bullhead	20	3	20	28	23	30	160
Rock bass	24	30	0	0	0	53	113
Nektonic Fishes:							
Largescale stoneroller	41	0	40	51	40	57	435
Silverjaw minnow	55	0	0	0	4	0	19
Bigeye chub	28	24	29	43	25	0	153
Hornyhead chub	28	0	42	46	21	59	382
Pallid shiner	39	0	0	0	14	0	4
Striped shiner	49	9	40	48	45	27	329
Bigmouth shiner	42	0	0	0	0	10	5
Wedgespot shiner	24	4	22	20	17	31	155
Spotfin shiner	42	5	0	0	0	32	86
Sand shiner	32	0	0	0	0	53	139
Eastern redbfin shiner	46	0	0	39	21	0	104
Northeastern mimic shiner	38	0	0	12	10	10	41
Steelcolor shiner	51	0	13	0	37	0	74
Bleeding shiner	38	0	0	53	34	66	403
Creek chubsucker	20	0	13	36	37	0	83
Northern studfish	42	6	42	46	33	52	403
Blackstripe topminnow	42	48	0	0	6	2	70
Benthic Fishes:							
Northern brook lamprey	24	0	0	0	0	30	14
Gravel chub	20	7	0	2	0	49	102
Suckermouth minnow	23	6	0	0	2	38	58
Rainbow darter	39	0	50	51	42	54	436
Striped fantail darter	29	49	1	13	34	64	334
Johnny darter	28	11	0	11	8	38	126
Northeastern orangethroat darter	39	0	0	5	28	80	343
Missouri saddled darter	26	0	0	0	0	58	142
Ozark logperch	39	22	0	0	0	67	144
River darter	34	0	0	17	0	0	3
Number of localities	120	55	69	124	42	283	

Table 27. Ozark-Mississippi 1 Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad		0.1	1.8	10.2
Northern hog sucker	4.6	9.6	15.0	5.3
Black redhorse		7.1	20.9	5.7
Golden redhorse		7.2	15.9	14.1
Shorthead redhorse		0.7	1.3	7.1
Channel catfish		T	0.1	3.6
Rock Bass		9.6	4.5	3.2
Green sunfish	50.5	6.8	2.1	1.9
Longear sunfish	25.8	43.1	24.5	26.8
Smallmouth bass		8.2	10.1	4.0
Nektonic Fishes:				
Central stoneroller	18.4	6.3	3.3	0.6
Largescale stoneroller	0.5	4.9	9.2	3.8
Hornyhead chub	0.5	1.6	5.9	0.4
Bigeye shiner	1.5	15.3	8.1	2.1
Striped shiner	4.1	4.2	9.1	1.4
Wedgespot shiner		4.4	6.7	6.5
Ozark minnow	3.5	12.5	3.9	0.1
Rosyface shiner		1.3	5.9	11.3
Spotfin shiner	0.9	0.7	1.8	12.0
Eastern redbfin shiner	2.6	4.6	1.0	T
Steelcolor shiner	0.3	2.5	1.7	9.7
Bleeding shiner	10.1	15.9	27.2	3.1
Southern redbelly dace	30.9	0.7		
Bluntnose minnow	13.4	8.3	1.2	41.7
Creek chub	8.4	0.6	0.1	T
Northern studfish	0.5	2.7	5.1	0.7
Benthic Fishes:				
Gravel chub		T	1.8	27.7
Suckermouth minnow		1.4	0.3	3.3
Slender madtom	2.2	3.2	1.2	0.3
Greenside darter	9.3	8.8	9.5	4.3
Rainbow darter	21.2	41.4	34.7	10.4
Striped fantail darter	19.5	8.8	1.2	0.8
Johnny darter	0.4	6.5	0.9	2.1
Northeastern orangethroat darter	46.3	10.3	1.9	5.1
Missouri saddled darter		4.7	16.8	13.6
Banded darter		0.4	4.5	1.9
Ozark logperch		3.2	2.7	4.2
Gilt darter		T	9.8	9.3
Banded sculpin	0.1	0.3	3.5	0.5
Ozark sculpin	9.4	8.4	4.7	3.0
Number of localities	27	51	18	12

Table 28. Ozark-Mississippi 1 Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-5, II-10 III-12	III-4, IV-21 V-20, VI-2	V-5, VI-9	VI-3, VII-6
Miles to Headwater	3.2 (1-6) 27	14.9 (5-31) 47	55.4 (34-80) 14	152.2 (113-210) 9
Stream Gradient (ft./mi.)	54.4 (19-150) 27	13.5 (2-48) 47	4.4 (2-9) 14	1.7 (1-2) 9
Local Relief (ft.)	202 (126-274) 27	249 (121-408) 47	247 (197-277) 14	251 (170-334) 9
Elevation (ft.)	726 (402-1157) 27	601 (339-931) 47	670 (551-843) 14	460 (393-574) 9
No. of Species per Sample	8.4 (1-19) 27	19.6 (5-56) 50	27.3 (16-61) 18	42.4 (22-87) 11
Margalef Diversity Index	0.97 (0.40-2.09) 26	2.42 (1.27-4.08) 24	2.75 (1.95-4.34) 11	4.38 (2.41-6.80) 8

Table 29. Ozark-Mississippi 2 Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad			0.8	5.1
Grass pickerel		19.6	3.3	
Black redhorse		1.4		3.4
Golden redhorse	0.6	12.4	20.1	21.4
Shorthead redhorse			1.5	4.1
Yellow bullhead	6.3	6.8	1.5	
Channel catfish				3.7
Green sunfish	20.9	8.9	7.5	2.7
Orangespotted sunfish		1.7	8.2	1.0
Bluegill	29.7	5.6	6.7	4.4
Longear sunfish		29.8	32.1	27.6
Smallmouth bass		7.9	7.5	6.1
Largemouth bass	7.6	15.1	9.0	2.0
White crappie			1.5	3.7
Nektonic Fishes:				
Central stoneroller	41.5	6.2	1.5	3.9
Largescale stoneroller	0.2	2.2	2.2	4.5
Bigeye shiner	5.4	37.9	42.2	25.3
Striped shiner	12.6	7.6	7.7	1.4
Rosyface shiner		0.1	1.8	4.3
Spotfin shiner		1.2	7.5	15.9
Eastern redbfin shiner	12.1	10.7	8.4	1.2
Steelcolor shiner		2.8	8.3	30.1
Bluntnose minnow	2.0	14.0	5.7	5.5
Bullhead minnow				1.1
Creek chub	9.9	0.7		
Creek chubsucker	5.4	0.7	0.7	
Blackstriped topminnow	7.4	2.1	3.0	
Brook silverside	1.8	5.8		2.5
Benthic Fishes:				
Gravel chub			4.6	12.6
Suckermouth minnow		1.7	3.1	7.4
Stonecat				3.2
Greenside darter	0.7	12.9	34.6	18.9
Rainbow darter	9.9	8.9	10.8	4.2
Striped fantail darter	4.0	5.0	3.1	2.1
Johnny darter	1.0	12.3	1.5	
Northeastern orangethroat darter		79.9	47.4	6.2
Missouri saddled darter			3.8	14.7
Banded darter			6.9	3.2
Ozark logperch		11.3	21.5	8.4
Gilt darter				16.8
Slenderhead darter			3.1	8.4
Number of localities	6	19	5	4

Table 30. Ozark-Mississippi 2 Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-1, II-2 III-2	III-4, IV-10 V-3	V-3, VI-6	VI-4
Miles to Headwater	2.8 (1-4) 5	14.3 (6-33) 17	58.8 (42-70) 4	133.2 (97-154) 4
Stream Gradient (ft./mi.)	46.4 (17-87) 5	9.6 (2-16) 17	4.3 (3-5) 4	2.3 (1-4) 4
Local Relief (ft.)	121 (91-155) 5	164 (122-204) 17	227 (196-267) 4	214 (210-221) 4
Elevation (ft.)	869 (783-1009) 5	847 (486-1118) 17	755 (653-854) 4	505 (459-590) 4
No. of Species per Sample	10.0 (8-15) 5	19.4 (13-29) 19	28.0 (21-35) 5	28.3 (18-37) 4
Margalef Diversity Index	1.22 (0.88-1.81) 5	2.15 (1.45-2.77) 9	2.67 (2.36-2.99) 2	3.73 (3.01-4.38) 3

Table 31. Ozark-Missouri Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-Missouri Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						
Species	Missouri	Neosho	White	Black	Southeast	Mississippi	No. of Occur.
Large Fishes:							
Chestnut lamprey	31	0	0	11	6	11	28
Paddlefish	26	0	5	23	0	0	12
Shortnose gar	39	0	4	0	0	11	15
Longnose gar	31	3	15	16	6	12	83
Alabama shad	37	0	0	0	0	15	7
Gizzard shad	36	7	19	20	5	12	126
Goldeye	42	0	0	0	0	11	15
Mooneye	20	0	6	19	0	14	22
Common carp	33	2	11	16	8	9	73
Highfin carpsucker	21	0	12	4	5	15	15
River carpsucker	32	5	6	6	3	11	35
Quillback	33	0	6	0	3	16	23
White sucker	43	13	7	15	0	8	106
Blue sucker	21	6	0	16	0	11	10
Smallmouth buffalo	33	0	0	11	3	10	23
Bigmouth buffalo	25	0	3	22	4	5	22
Black buffalo	20	12	0	21	0	4	16
Silver redhorse	34	0	0	7	11	15	48
Shorthead redhorse	37	6	3	12	9	17	91
Blue catfish	40	0	9	0	0	0	6
Yellow bullhead	30	3	20	28	23	20	160
Channel catfish	33	12	14	7	5	17	94
Flathead catfish	31	7	11	5	4	14	58
White bass	36	0	0	7	4	7	16
Rock bass	53	29	0	0	0	24	113
Orangespotted sunfish	39	28	0	3	0	16	93
Spotted bass	37	16	22	19	29	0	144
White crappie	34	12	11	9	4	12	76
Black crappie	23	3	7	10	9	12	31
Sauger	31	0	0	12	4	9	19
Walleye	24	0	4	20	5	11	36
Freshwater drum	34	0	7	16	4	8	55
Nektonic Fishes:							
Largescale stoneroller	51	0	40	51	40	41	435
Western silvery minnow	51	0	0	0	0	0	5
Silver chub	29	0	8	0	0	15	7
Hornyhead chub	59	0	42	46	21	28	382
Golden shiner	31	9	4	14	4	16	71
Emerald shiner	26	0	0	18	10	11	37
Ghost shiner	46	0	0	0	0	9	20
Common shiner	51	0	0	0	0	0	5
Wedgespot shiner	31	4	22	20	17	24	155
Blacknose shiner	55	0	0	0	0	0	28
Red shiner	63	11	0	1	0	10	135
Spotfin shiner	32	5	0	0	0	42	86
Sand shiner	53	0	0	0	0	32	139
Western redbfin shiner	72	21	0	0	0	0	165
Bleeding shiner	66	0	0	53	34	38	403
Northern studfish	52	6	42	46	33	42	403
Blackspotted topminnow	60	0	45	48	43	19	398
Plains topminnow	53	10	0	0	0	0	51

Table 31. (Continued). Ozark-Missouri Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Ozark-Missouri Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Ozark Divisions						
Species	Missouri	Neosho	White	Black	Southeast	Mississippi	No. of Occur.
Benthic Fishes:							
Northern brook lamprey	30	0	0	0	0	24	14
Southern brook lamprey	34	18	0	0	0	0	3
Speckled chub	51	0	0	0	0	0	3
Gravel chub	49	7	0	2	0	20	102
Suckermouth minnow	38	6	0	0	2	23	58
Slender madtom	62	40	24	4	10	17	269
Stonecat	46	4	0	0	0	12	46
Rainbow darter	54	0	50	51	42	39	436
Striped fantail darter	64	49	1	13	34	29	334
Least darter	34	20	0	0	0	3	17
Niangua darter	55	0	0	0	0	0	30
Johnny darter	38	11	0	11	8	28	126
Stippled darter	53	23	24	2	0	0	140
Northeastern orangethroat darter	80	0	0	5	28	39	343
Missouri saddled darter	58	0	0	0	0	26	142
Ozark logperch	67	22	0	0	0	39	144
Bluestripe darter	55	0	0	0	0	0	30
Gilt darter	28	0	10	22	11	17	91
Slenderhead darter	49	3	0	0	2	18	82
Banded sculpin	34	33	45	36	10	8	233
Ozark sculpin	43	0	24	34	3	17	200
Number of localities	283	55	69	124	42	120	

Table 32. Ozark-Missouri Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River	Osage
Large Fishes:					
Longnose gar	0.1	0.1	0.2	0.8	5.7
Gizzard shad	0.3	2.0	3.2	7.6	8.5
White sucker	5.3	0.6	0.3	0.1	T
Northern hog sucker	0.5	4.4	3.7	5.4	T
Black redhorse	2.3	10.7	15.1	10.1	1.5
Golden redhorse	0.1	12.6	12.8	16.2	0.9
Shorthead redhorse		0.6	2.2	3.2	2.1
Channel catfish	0.1	0.2	1.3	1.5	8.2
Rock bass	0.1	7.8	15.8	14.7	
Green sunfish	59.4	14.5	4.7	2.6	0.4
Bluegill	11.5	6.9	2.7	2.2	30.1
Longear sunfish	8.3	26.8	25.2	15.6	7.9
Smallmouth bass	2.0	6.0	5.6	7.3	2.6
Spotted bass		0.7	0.8	0.3	4.3
Largemouth bass	3.4	2.9	2.1	1.9	1.1
Nektonic Fishes:					
Central stoneroller	37.0	8.7	3.4	1.8	T
Largescale stoneroller	0.4	3.6	9.8	13.0	0.3
Emerald shiner		T	T	0.7	35.3
Bigeye shiner	T	1.0	1.3	3.6	
Ghost shiner		T	0.1	0.2	3.5
Striped shiner	0.6	4.0	3.8	1.0	
Wedgespot shiner		0.7	3.2	6.5	T
Red shiner	0.2	1.5	4.0	0.5	3.0
Ozark minnow	3.4	23.7	18.0	1.7	2.5
Rosyface shiner	T	2.6	5.6	18.8	6.1
Spotfin shiner		0.1	0.2	5.0	
Sand shiner	0.1	0.5	1.0	0.8	7.3
Western redfin shiner	1.9	5.7	1.4	0.2	T
Northeastern mimic shiner					4.0
Bleeding shiner	10.6	26.3	30.6	28.3	2.2
Southern redbelly dace	24.4	1.2	0.1	T	T
Bluntnose minnow	3.6	7.5	6.5	8.1	16.9
Creek chub	8.5	1.0	0.1	0.1	
Northern studfish	2.5	3.3	4.6	2.3	3.5
Brook silverside	0.5	2.9	2.7	3.6	14.3
Benthic Fishes					
Gravel chub	0.1		2.9	22.4	90.0
Slender madtom	2.2	3.2	1.5	2.8	
Greenside darter		4.5	8.6	1.9	T
Rainbow darter	1.3	26.5	28.1	12.0	0.1
Striped fantail darter	13.6	22.1	11.2	5.1	0.2
Johnny darter	0.1	11.1	0.7	0.5	0.2
Stippled darter	4.3	0.8	0.3	0.8	
Northeastern orangethroat darter	69.1	33.5	13.1	4.1	
Missouri saddled darter		1.0	14.8	23.4	2.8
Banded darter		0.7	6.8	6.2	0.3
Ozark logperch		1.0	1.7	3.8	0.5
Gilt darter		T	0.8	10.9	2.5
Ozark sculpin	7.3	3.0	3.8	1.3	0.1
Number of localities	51	196	100	27	13

Table 33. Ozark-Missouri Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River	Osage
Stream Order	I-10, II-17 III-22	II-2, III-26, IV-79, V-45	III-1, IV-2 V-37, VI-25	VI-10 VII-11	VIII-9
Miles to Headwater	3.4 (1-6) 49	15.0 (5-31) 152	51.4 (31-96) 65	173 (98-281) 21	404 (276-469) 9
Stream Gradient (ft./mi.)	41.5 (11-131) 49	11.3 (3-29) 152	3.9 (1-9) 65	2.1 (1-5) 21	1.0 (1-1) 9
Local Relief (ft.)	146 (30-268) 49	197 (111-365) 152	233 (118-394) 65	293 (185-381) 21	234 (172-290) 9
Elevation (ft.)	915 (533-1469) 49	847 (482-1260) 152	819 (545-1073) 65	657 (492-845) 21	574 (533-683) 9
No. of Species per Sample	11.6 (2-32) 51	22.0 (9-53) 183	29.2 (11-57) 89	34.5 (17-75) 24	37.3 (18-60) 11
Margalef Diversity Index	1.23 (0.27-2.20) 40	2.30 (1.27-3.90) 100	2.75 (1.56-4.93) 41	3.49 (2.38-5.63) 15	3.65 (1.80-5.12) 9

Table 34. Prairie Faunal Region: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Prairie Faunal Region** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

	Faunal Region				
Species	Prairie	River	Lowland	Ozark	No. of Occur.
Large Fishes:					
River carpsucker	45.4	57.0	3.6	6.6	355
Quillback	38.6	15.6	0.8	10.0	120
White sucker	52.9	1.9	0.0	20.9	405
Golden redhorse	27.9	3.6	3.8	49.3	491
Black bullhead	60.4	13.1	11.7	13.5	518
Yellow bullhead	36.1	4.4	13.5	30.3	382
Pumpkinseed	25.1	0.0	0.0	25.1	2
Nektonic Fishes:					
Mud minnow	50.1	0.0	0.0	0.0	1
Central stoneroller	50.0	4.9	3.3	69.5	1,186
Western silvery minnow	24.7	43.9	0.0	3.4	80
Brassy minnow	42.1	11.8	0.0	0.0	27
Plains minnow	27.3	54.7	0.0	1.0	117
Common shiner	59.6	0.8	0.0	1.6	191
Bigmouth shiner	61.3	17.3	0.0	1.1	303
Blacknose shiner	20.2	0.0	0.0	32.6	47
Red shiner	79.4	46.0	1.7	16.1	922
Sand shiner	65.0	28.6	0.0	20.1	693
Topeka shiner	53.1	0.0	0.0	1.5	75
Western Redfin shiner	57.9	1.8	0.0	26.0	570
Southwestern mimic shiner	30.4	0.0	0.0	20.2	10
Fathead minnow	70.6	13.8	0.0	5.6	497
Western slim minnow	20.4	0.0	0.0	30.5	15
Creek chub	60.3	2.8	4.3	40.2	869
Trout perch	48.9	3.3	0.0	1.2	43
Plains killifish	28.1	24.2	0.0	0.0	9
Benthic Fishes:					
Suckermouth minnow	58.9	17.7	7.2	10.6	449
Stonecat	27.3	13.5	0.0	23.2	124
Tadpole madtom	22.1	5.7	43.7	4.1	110
Johnny darter	52.5	3.0	4.3	22.9	461
Northeastern orangethroat darter	39.4	1.1	2.2	52.3	711
Plains orangethroat darter	50.4	0.0	0.0	0.0	6
Redfin darter	37.7	0.0	0.0	12.6	4
Ozark logperch	31.2	5.2	0.0	36.5	323
Channel darter	21.1	0.0	0.0	29.6	12
Blackside darter	35.1	0.9	20.1	8.9	115
Slenderhead darter	30.7	6.1	0.0	28.0	188
Number of localities	727	96	110	693	

Table 35. Prairie-Mississippi Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Prairie-Mississippi Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Prairie Divisions					No. of Occur.
	Mississippi	Lower Missouri	Upper Missouri	Osage	Neosho	
Large Fishes:						
American eel	26	25	0	0	0	4
Highfin carpsucker	21	16	10	6	0	10
River carpsucker	24	24	44	16	0	219
Quillback	21	22	24	1	0	79
White sucker	33	45	25	16	0	267
Northern hog sucker	20	34	0	3	0	27
Silver redhorse	53	0	0	0	0	8
Golden redhorse	43	41	1	3	11	153
Shorthead redhorse	26	28	12	4	4	79
White bass	35	11	6	0	0	9
Smallmouth bass	36	29	0	2	0	60
Black crappie	28	14	12	5	0	28
Sauger	20	13	19	0	0	8
Nektonic Fishes:						
Mud minnow	50	0	0	0	0	1
Largescale stoneroller	35	13	0	8	0	16
Mississippi silvery minnow	54	0	0	0	0	12
Pallid shiner	52	0	0	0	0	5
Emerald shiner	36	8	20	12	0	75
River shiner	32	0	21	0	0	10
Bigeye shiner	36	10	0	0	46	39
Ghost shiner	30	22	3	17	12	70
Striped shiner	51	0	0	6	5	24
Bigmouth shiner	35	9	66	0	0	255
Sand shiner	36	40	59	33	0	442
Eastern redbfin shiner	66	0	0	0	0	45
Steelcolor shiner	52	0	0	0	0	5
Fathead minnow	42	28	67	21	0	414
Bullhead minnow	63	0	0	0	0	36
Blackstripe topminnow	33	16	0	23	47	82
Benthic Fishes:						
Gravel chub	38	16	0	0	0	13
Slender madtom	30	25	2	22	12	86
Stonecat	21	8	24	14	0	52
Tadpole madtom	28	19	6	10	0	41
Freckled madtom	25	8	0	23	0	13
Western sand darter	51	0	0	0	0	3
Bluntnose darter	50	0	0	4	6	17
Striped fantail darter	39	23	0	11	38	97
Johnny darter	49	43	20	6	21	283
Northeastern orangethroat darter	37	59	0	40	0	279
Northern logperch	51	0	0	0	0	2
Blackside darter	39	16	13	0	0	66
Slenderhead darter	40	15	0	26	8	80
Banded sculpin	45	0	0	8	0	7
Number of localities	132	272	251	60	12	

Table 36. Prairie-Mississippi Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad		1.1	3.0	13.2
Common carp	0.2	2.3	6.0	5.0
River carpsucker		11.9	12.8	20.0
White sucker	10.2	9.3	0.5	T
Golden redhorse		5.0	9.1	1.7
Shorthead redhorse		0.3	8.7	2.1
Black bullhead	10.2	9.5	0.6	
Yellow bullhead	0.3	3.8	3.6	T
Channel catfish		4.6	14.9	28.8
Flathead catfish			0.7	4.7
Green sunfish	74.0	30.3	25.1	1.7
Orangespotted sunfish	3.6	10.2	2.7	1.6
Bluegill		1.5	4.8	0.2
Freshwater drum		0.3	1.2	12.7
Nektonic Fishes:				
Central stoneroller	2.9	4.3	1.8	0.2
Golden shiner	16.7	2.4	0.3	T
Emerald shiner		1.4	1.7	9.5
Ghost shiner		0.1	3.9	10.7
Bigmouth shiner	1.4	23.2	1.1	0.6
Red shiner	2.6	16.5	42.0	63.0
Sand shiner	0.1	5.9	5.2	3.0
Redfin shiner	6.6	12.2	10.4	0.3
Bluntnose minnow	3.1	17.4	25.4	8.3
Fathead minnow	58.5	6.1	0.7	0.1
Bullhead minnow	0.9	0.2	3.1	1.5
Creek chub	6.6	6.2	0.4	0.2
Benthic Fishes:				
Gravel chub			0.3	12.0
Suckermouth minnow	0.6	5.3	11.6	17.1
Slender madtom		1.0	12.9	1.2
Stonecat		T	2.3	9.3
Freckled madtom			0.1	7.7
Striped fantail darter	0.9	15.5	33.4	3.9
Johnny darter	45.4	35.1	10.1	1.5
Northeastern orangethroat darter	52.2	37.1	5.6	2.3
Slenderhead darter		0.5	14.8	42.6
Number of localities	17	70	56	17

Table 37. Prairie-Mississippi Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-7, II-5, III-5	III-20, IV-35, V-5	IV-9, V-26 V-6	V-5, VI-1, VII-4, VIII-1
Miles to Headwater	3.1 (1-6) 17	16.4 (6-31) 60	59.0 (33-93) 40	159.8 (99-476) 11
Stream Gradient (ft./mi.)	46.2 (5-200) 17	6.9 (1-25) 60	3.3 (1-8) 40	1.5 (1-4) 11
Local Relief (ft.)	64 (27-122) 17	100 (8-295) 60	124 (56-242) 40	180 (95-348) 11
Elevation (ft.)	731 (500-880) 17	618 (432-827) 60	582 (435-714) 40	510 (452-585) 11
No. of Species per Sample	7.8 (3-14) 17	16.5 (5-28) 65	20.8 (7-47) 45	24.3 (14-55) 14
Margalef Diversity Index	0.92 (0.37-2.13) 16	1.79 (0.98-2.89) 30	2.52 (1.38-3.70) 16	2.39 (1.82-4.05) 6

Table 38. Prairie-Lower Missouri Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Prairie-Lower Missouri Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Prairie Divisions					No. of Occur.
	Lower Missouri	Mississippi	Upper Missouri	Osage	Neosho	
Large Fishes:						
Shortnose gar	24	13	18	4	0	38
American eel	25	26	0	0	0	4
River carpsucker	24	24	44	16	0	219
Quillback	22	21	24	1	0	79
White sucker	45	33	25	16	0	267
Northern hog sucker	34	20	0	3	0	27
Smallmouth buffalo	23	19	12	11	0	49
Bigmouth buffalo	22	16	19	7	4	52
Black buffalo	23	10	13	8	0	16
Black redhorse	38	13	0	4	0	18
Golden redhorse	41	43	1	3	11	153
Shorthead redhorse	28	26	12	4	4	79
Longear sunfish	42	0	0	24	47	84
Smallmouth bass	29	36	0	2	0	60
Spotted bass	32	2	0	12	27	24
Walleye	20	18	11	7	0	19
Freshwater drum	26	15	12	14	0	55
Nektonic Fishes:						
Western silvery minnow	27	0	29	0	0	35
Hornyhead chub	25	6	0	31	0	28
Ghost shiner	22	30	3	17	12	70
Common shiner	68	0	12	0	0	174
Blacknose shiner	44	0	0	11	0	18
Rosyface shiner	55	0	0	7	0	54
Sand shiner	40	36	59	33	0	442
Topeka shiner	47	0	16	0	0	70
Western redbfin shiner	70	21	15	31	49	356
Southern redbelly dace	40	13	0	0	0	17
Fathead minnow	28	42	67	21	0	414
Creek chub	58	35	49	27	7	480
Trout perch	31	3	22	0	0	36
Blackspotted topminnow	26	0	0	32	0	16
Plains topminnow	52	0	0	0	0	12
Brook silverside	28	3	0	27	43	52
Benthic Fishes:						
Slender madtom	25	30	2	22	12	86
Striped fantail darter	23	39	0	11	38	97
Johnny darter	43	49	20	6	21	283
Northeastern orangethroat darter	59	37	0	40	0	279
Ozark logperch	48	16	1	20	15	131
Number of localities	272	132	251	60	12	

Table 39. Prairie-Lower Missouri Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River
Large Fishes:			
Gizzard shad	0.2	7.5	13.5
Common carp	0.4	1.4	7.6
River carpsucker	0.1	4.4	6.3
White sucker	16.5	10.2	2.0
Golden redhorse	0.7	9.5	11.1
Black bullhead	17.4	7.5	1.1
Channel catfish	0.1	0.9	4.1
Green sunfish	39.9	24.6	12.7
Orangespotted sunfish	11.4	6.8	4.0
Bluegill	6.5	5.4	3.1
Largemouth bass	4.8	6.9	7.7
White crappie	0.1	3.2	3.4
Freshwater drum		0.2	4.2
Nektonic Fishes:			
Central stoneroller	19.3	12.7	3.4
Ghost shiner		0.5	17.1
Common shiner	5.8	10.3	1.0
Red shiner	10.1	15.1	26.7
Rosyface shiner	T	4.1	10.3
Sand shiner	7.6	5.8	11.0
Western redfin shiner	16.3	24.2	8.0
Bluntnose minnow	5.9	13.4	14.7
Fathead minnow	6.6	1.2	0.5
Creek chub	23.6	5.1	0.6
Benthic Fishes:			
Suckermouth minnow	4.8	6.8	16.7
Tadpole madtom		0.4	3.2
Johnny darter	17.3	20.3	12.7
Northeastern orangethroat darter	74.0	59.3	36.2
Ozark logperch	2.0	4.8	10.8
Slenderhead darter		0.6	12.1
Number of localities	95	168	41

Table 40. Prairie-Lower Missouri Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River
Stream Order	I-8, II-30, III-53, IV-1 VI-1	II-1, III-39 IV-85, V-20,	IV-1, V-19 VI-12
Miles to Headwater	3.9 (1-6) 92	13.9 (6-31) 146	47.8 (20-95) 32
Stream Gradient (ft./mi.)	19.7 (1-95) 92	9.5 (1-40) 146	2.6 (1-8) 32
Local Relief (ft.)	105 (34-253) 92	142 (23-291) 146	194 (100-289) 32
Elevation (ft.)	722 (547-912) 92	670 (449-860) 146	596 (501-719) 32
No. of Species per Sample	9.2 (2-22) 95	15.1 (3-34) 159	22.1 (10-40) 37
Margalef Diversity Index	1.08 (0.16-3.08) 67	1.60 (0.50-3.35) 74	2.24 (1.73-2.92) 14

Table 41. Prairie-Upper Missouri Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Prairie-Upper Missouri Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Prairie Divisions					No. of Occur.
	Upper Missouri	Mississippi	Lower Missouri	Osage	Neosho	
Large Fishes:						
Goldeye	34	3	18	2	0	37
Mooneye	26	17	0	9	0	6
River carpsucker	44	24	24	16	0	219
Quillback	24	21	22	1	0	79
White sucker	25	33	45	16	0	267
Channel catfish	38	27	25	23	7	222
Flathead catfish	22	19	14	17	4	68
Nektonic Fishes:						
Western silvery minnow	29	0	27	0	0	35
Brassy minnow	54	0	0	0	0	18
Plains minnow	47	0	14	0	0	56
Flathead chub	51	0	0	0	0	6
Silver chub	30	14	8	9	0	36
Emerald shiner	20	36	8	12	0	75
River shiner	21	32	0	0	0	10
Bigmouth shiner	66	35	9	0	0	255
Sand shiner	59	36	40	33	0	442
Fathead minnow	67	42	28	21	0	414
Creek chub	49	35	58	27	7	480
Trout perch	22	3	31	0	0	36
Plains killfish	51	0	0	0	0	5
Benthic Fishes:						
Speckled chub	52	0	0	3	0	21
Stonecat	24	21	8	14	0	52
Plains orangethroat darter	51	0	0	0	0	6
Number of localities	251	132	272	60	12	

Table 42. Prairie-Upper Missouri Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad		0.5	1.0	7.4
Goldeye		1.0	1.0	3.0
Common carp	2.2	2.3	2.6	17.3
River carpsucker	5.0	3.6	58.0	24.3
White sucker	29.7	22.0	0.3	0.1
Black bullhead	16.9	11.6	2.6	2.4
Channel catfish	0.9	3.6	24.5	25.5
Flathead catfish		T	0.2	3.5
Green sunfish	30.3	30.6	4.3	1.9
Orangespotted sunfish	1.3	8.5	1.2	0.8
Bluegill	9.4	6.4	0.5	0.1
Freshwater drum	0.3		0.2	5.7
Nektonic Fishes:				
Central stoneroller	5.5	7.0	0.5	0.2
Western silvery minnow	T	T	1.7	3.7
Plains minnow	T	0.3	6.4	20.3
Emerald shiner	1.7	0.1	2.6	3.1
Bigmouth shiner	35.6	21.8	13.3	2.4
Red shiner	3.7	18.3	41.1	52.5
Sand shiner	9.7	10.3	16.5	8.3
Western redbfin shiner	0.1	9.3	0.5	
Bluntnose minnow	0.5	4.6	2.3	2.3
Fathead minnow	21.7	14.4	11.3	3.1
Creek chub	15.9	9.7	2.2	0.2
Benthic Fishes:				
Speckled chub		0.1	11.2	54.6
Suckermouth minnow	42.4	21.8	66.4	38.7
Johnny darter	57.2	56.1	4.2	1.0
Number of localities	55	105	70	39

Table 43. Prairie-Upper Missouri Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-12, II-24, III-17	II-4, III-45, IV-37, V-12	IV-8, V-34, VI-16	V-4, VI-25, VII-5
Miles to Headwater	3.7 (1-6) 53	14.9 (7-31) 98	58.2 (31-95) 58	134.5 (98-205) 34
Stream Gradient (ft./mi.)	27.3 (1-100) 53	8.4 (1-33) 98	3.5 (1-6) 58	2.0 (1-4) 34
Local Relief (ft.)	119 (10-250) 53	134 (15-203) 98	143 (10-217) 58	162 (74-211) 34
Elevation (ft.)	886 (594-1080) 53	836 (628-1010) 98	824 (590-1021) 58	763 (617-897) 34
No. of Species per Sample	7.8 (3-19) 55	11.4 (3-26) 102	10.9 (4-36) 64	13.6 (5-44) 38
Margalef Diversity Index	0.95 (0.37-1.88) 15	1.36 (0.38-2.41) 33	1.44 (0.53-2.55) 12	2.19 (0.85-3.32) 7

Table 44. Prairie-Osage Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Prairie-Osage Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Prairie Divisions					No. of Occur.
	Osage	Mississippi	Lower Missouri	Upper Missouri	Neosho	
Large Fishes:						
Warmouth	35	5	16	0	0	10
Longear sunfish	24	0	42	0	47	84
Nektonic Fishes:						
Hornyhead chub	31	6	25	0	0	28
Sand shiner	33	36	40	59	0	442
Fathead minnow	21	42	28	67	0	414
Blackstripe topminnow	23	33	16	0	47	82
Blackspotted topminnow	32	0	26	0	0	16
Mosquitofish	32	18	10	5	5	34
Brook silverside	27	3	28	0	43	52
Benthic Fishes:						
Slender madtom	22	30	25	2	12	86
Freckled madtom	23	25	8	0	0	13
Greenside darter	43	0	0	0	13	5
Slough darter	40	9	0	0	15	12
Northeastern orangethroat darter	40	37	59	0	0	279
Ozark logperch	20	16	48	1	15	131
Slenderhead darter	26	40	15	0	8	80
Number of localities	60	132	272	251	12	

Table 45. Prairie-Osage Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River	Large River
Large Fishes:				
Gizzard shad	1.0	0.8	0.3	3.0
Common carp		3.2	0.2	15.8
River carpsucker		14.1	10.2	6.0
Smallmouth buffalo		T	0.1	3.2
Black bullhead	11.1	7.5	0.8	17.3
Channel catfish		19.3	3.5	11.0
Flathead catfish		0.9	0.6	4.2
Green sunfish	38.0	25.0	12.7	2.3
Orangespotted sunfish	2.0	5.0	25.4	0.3
Bluegill	21.5	11.8	37.1	18.9
Longear sunfish	6.1	0.8	2.8	0.1
Largemouth bass	4.1	2.4	1.3	0.2
White crappie	11.1	4.0	2.4	1.0
Freshwater drum		0.6		8.8
Nektonic Fishes:				
Central stoneroller	19.0	8.3	1.5	0.4
Golden shiner	8.0	3.5	T	T
Emerald shiner		0.1	T	4.3
Red shiner	7.3	38.7	60.1	89.1
Sand shiner	2.5	6.5	4.5	1.0
Western redbfin shiner	20.7	13.5	12.1	0.1
Bluntnose minnow	22.4	16.4	9.1	0.2
Fathead minnow	0.3	5.5	1.4	0.2
Creek chub	5.4	1.9	0.2	0.1
Blackstripe topminnow	6.5	1.0	0.4	0.1
Blackspotted topminnow	3.4	1.6		0.1
Mosquitofish	1.3	0.4	6.2	1.3
Benthic Fishes:				
Suckermouth minnow		6.2	16.0	12.7
Slender madtom	0.4	3.8	1.4	4.8
Stonecat		0.6	1.0	30.2
Freckled madtom			0.2	10.9
Striped fantail darter	0.7	19.3	19.1	
Slough darter	11.9	0.1		0.3
Northeastern orangethroat darter	85.7	12.5	34.1	2.4
Ozark logperch	1.3	1.9	5.9	0.3
Slenderhead darter		3.2	16.2	36.6
Number of localities	13	26	18	10

Table 46. Prairie-Osage Missouri Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River	Large River
Stream Order	I-4, II-3, III-4	III-1, IV-13, V-9	IV-2, V-5, VI-7	V-2, VII-6, VIII-1
Miles to Headwater	2.7 (1-6) 12	15.3 (3-32) 23	49.8 (33-79) 14	162.7 (75-240) 9
Stream Gradient (ft./mi.)	40.5 (7-95) 12	7.4 (2-22) 23	2.1 (1-4) 14	1.1 (1-2) 9
Local Relief (ft.)	86 (33-155) 12	122 (47-193) 23	118 (70-155) 14	104 (60-191) 9
Elevation (ft.)	792 (675-932) 12	772 (672-978) 23	758 (690-875) 14	712 (659-750) 9
No. of Species per Sample	9.5 (2-20) 13	14.8 (6-37) 26	14.4 (7-28) 17	18.9 (7-44) 10
Margalef Diversity Index	1.10 (0.16-2.01) 13	1.84 (1.12-3.14) 15	1.75 (0.67-2.70) 9	2.00 (1.13-3.87) 6

Table 47. Prairie-Neosho Division: Constancy-Fidelity indices of characteristic species. Characteristic species are those having indices for the **Prairie-Neosho Division** (first column) that are greater than 20, and exceed indices for other faunal regions (indices that are boldface) by a factor of 5.

Species	Prairie Divisions					No. of Occur.
	Neosho	Mississippi	Lower Missouri	Upper Missouri	Osage	
Large Fishes:						
Spotted sucker	48	13	0	0	0	4
Longear sunfish	47	0	42	0	24	84
Spotted bass	27	2	32	0	12	24
Nektonic Fishes:						
Bigeye shiner	46	36	10	0	0	39
Bluntnose shiner	60	0	0	0	0	3
Spotfin shiner	63	0	0	0	0	4
Southwestern mimic shiner	63	0	0	0	0	4
Western slim minnow	67	0	0	0	0	5
Blackstripe topminnow	47	33	16	0	23	82
Brook silverside	43	3	28	0	27	52
Benthic Fishes:						
Brindled madtom	57	0	0	0	0	2
Arkansas darter	67	0	0	0	0	5
Striped fantail darter	38	39	23	0	11	97
Neosho River orangethroat darter	90	0	0	0	0	12
Redfin darter	53	0	0	0	0	1
Channel darter	63	0	0	0	0	4
Number of localities	12	132	272	251	60	

Table 48. Prairie-Neosho Division: Proportional abundance of common fishes in collections from four stream community zones. Common fishes are those that occurred in at least 20 percent of the collections and comprised at least 3.0 percent of the combined collections from one or more community zones. Boldface percentages indicate community zones in which the species met these criteria. T = trace (<0.1%).

Species	Headwater	Creek	Small River
Large Fishes:			
Black bullhead	2.5	3.7	1.2
Green sunfish	28.6	12.9	14.1
Orangespotted sunfish	20.6	14.1	36.9
Bluegill	7.1	6.7	4.3
Longear sunfish	39.1	18.4	16.5
Spotted bass		2.5	3.5
Largemouth bass	0.6	9.8	11.8
White crappie		4.9	3.1
Nektonic Fishes:			
Central stoneroller	1.3	1.2	3.2
Golden shiner	1.6	10.4	0.8
Bigeye shiner	35.2	19.0	6.1
Ghost shiner			4.0
Red shiner	0.8	13.5	46.1
Western redbfin shiner	31.0	16.3	9.2
Southwestern mimic shiner		1.9	6.8
Bluntnose minnow	20.1	17.5	15.1
Blackstripe topminnow	4.8	9.0	2.2
Brook silverside	4.9	6.3	0.5
Benthic Fishes:			
Suckermouth minnow		4.9	16.0
Slender madtom	0.2		4.2
Striped fantail darter	39.5	22.0	24.3
Slough darter		2.4	3.0
Johnny darter	0.2	19.5	3.4
Neosho River orangethroat darter	58.1	36.6	25.9
Redfin darter			8.4
Ozark logperch		9.8	4.2
Channel darter		2.4	4.9
Number of localities	6	7	5

Table 49. Prairie-Neosho Division: Selected physical and biological variables in samples from four stream fish community zones. For each variable the frequency distribution (stream order) or average, range, and sample size (other variables) are given.

Variable	Headwater	Creek	Small River
Stream Order	I-1, II-4, III-1	III-1, IV-5	VI-3
Miles to Headwater	3.3 (1-6) 6	18.5 (10-30) 6	64.7 (54-76) 3
Stream Gradient (ft./mi.)	21.3 (12-33) 6	3.5 (3-6) 6	2.0 (2-2) 3
Local Relief (ft.)	58 (39-80) 6	88 (72-102) 6	100 (88-109) 3
Elevation (ft.)	1116 (1050-1177) 6	936 (891-979) 6	883 (862-901) 3
No. of Species per Sample	11.3 (3-17) 6	17.1 (9-26) 7	25.8 (16-35) 5
Margalef Diversity Index	1.17 (0.52-1.58) 6	1.98 (1.30-2.48) 4	2.30 (2.05-2.56) 2

